

REMARKS

Drews (sidewall)

Claims 1, 2, 4-9, 14-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drews 302 (UA 4,284,302) in view of Fronek et al (US 5,848,869) and optionally Drews 290 (US 4,180,290). This rejection is traversed.

In general, the Examiner has failed to produce prior art that teaches the claimed tire surface projections or teachings within the four corners of any cited reference that would instruct one skilled in the art toward modifications necessary to achieve the subject invention. As such, the Examiner's selective and unsubstantiated combination of isolated features from a plurality of disparate, non-analogous art must be considered insufficient under 35 U.S.C. 103 to render the invention unpatentable. As set forth in the claims, the subject projections are specifically recited as including an undercut formed by sides of unequal length forming an apex that protrudes by a height (h) from a radially outer surface from which the first and second sides originate. The problems that the claimed invention is intended to reduce or eliminate are: enhanced self-cleaning; improved optical appearance; improved water repellence that reduces the risk of aquaplaning; and allow for color differentiation. For the Examiner's rejection to be appropriate, the combination of references must teach and show each claimed element and there must be some teaching or suggestion within the references themselves that would instruct one skilled in the art *faced with the problems listed above* (emphasis added) to make the proposed modification and combination of selected elements. Applicants submit the conclusions of the Examiner are not supported by a fair teaching of the references. Moreover, the references do not address the same problems as those addressed by the instant invention and it would not, therefore, be obvious for one skilled in the art to look to the cited art for a solution.

This rejection is respectfully traversed for the following reasons. The Drews reference is no more relevant than the previously cited art that relates to the use of flutes for the purpose of reducing drag on a vehicle. There is no teaching or suggestion in Drews as to the use of acute projections on a radially outer tire surface (S1) with projections located on a radially outer tire component (claim 1). The Examiner has not identified acute projections located on *radially outer* (emphasis added) Drews tire surfaces and further has not identified acute projections on radially outer Drews tire components. Nor does Drews teach a projection on a radially outer tire component that is dimensioned and configured as defined in the claims.

Specifically, Drews teaches fluted projections that are in the range of about 1/16 to 1/8 in., which may be significantly smaller or “microscopic”. Flutes of this magnitude are decidedly different from the protrusion dimensions as set forth in the subject claim. The general language of Drews that the flutes may be smaller or “microscopic” must be taken in context of the purpose of the Drews configuration, that is, to streamline the external surfaces of an automobile for the purpose of reducing drag. There is no teaching in Drews that would instruct one of skill in the art to reduce flutes of about 1/16 to 1/8 inches down to .2 to 100 micrometers for a purpose unrelated to the problems that the Drews disclosure is intended to address. It is significant to note that Drews specifically states that “size is not critical but will normally be as small as practical to produce the desired interaction”. This desired interaction is “developing increased propulsions efficiency by reducing opposing forces acting on the vehicle”. (See Drews col.1, lines 5-10). Thus the range of sizes taught by Drews for its intended purpose of reducing vehicle drag is limited by that objective. For the Examiner to extrapolate the teachings of Drews in which the preferred flute size is on the order of 1/16 to 1/8 inches to equate with the .2 to 100 micrometers recited in the claims is not properly founded and based solely on a re-constructing of Drews based solely on hindsight.

In contrast, as stated in the specification and as achieved by structure defined in the claims, the projections of the invention are intended to address the problem of providing channels for water evacuation from radially outward tire surfaces that do not create structural traps for dirt and debris. Drews flutes at 1/16 to 1/8 inch would not be functional to meeting the dual objectives of providing dirt resistance and water evacuation on radially outward tire tread projections and surfaces. The sizing of the Drews channels would create dirt traps for collecting debris.

Moreover, it is not clear from Drews as to what the lower limit of the Drews flutes can be so as to be “practical to produce the desired interaction”. Drews would not enable one skilled in the art to practice the claimed invention for there is neither a clear instruction in Drews as to the definition of “size”, nor an indication of what that size limit can be so as to produce the “desired interaction”. Drews does not even define the term “size” and it is unclear as to whether Drews is referencing length, width, height of the projections. In contrast, the claimed invention recites the height at the apex in specifying a range of heights that is neither taught nor suggested by the Drews reference.

It is further unclear from Drews as to what is “microscopic”. The lower limit inferred by Drews could be above Applicants’ claimed range. Drews further states that the size of its

projections is limited by two conditions: small as possible; but large enough to achieve a “sufficient efficiency”. The Drews specification is of little or no use as instruction to one skilled in the art for neither limit is sufficiently specific to be used as a design criteria. At what size would Drews “efficiency” begin? Such ambiguous and nonspecific limitations cannot be used by one of ordinary skill in achieving the subject claimed invention. Drews, as explained above, is even less clear in that it does not teach how to measure the “size”; how to measure “efficiency”; it does not define “sufficient efficiency”, or define “microscopic”. The invention, on the other hand, as claimed, discloses a specific range for a specific application. Applicants therefore maintain that Drews is deficient in teaching projections of the specified and claimed configuration and height.

The present invention discloses a radially outward tire surface, specifically claimed radially outward tire component having projections. The projections on the radially outward tire components have a configuration that provides dirt-repellence and water-repellence and is self-cleaning. In addition, the projections and their orientation provide a visual differentiation in the surface. In order to be effective in meeting all three of the objectives, the invention structure needs to be smaller than the size of dirt particles. See para. 7-9 and 15 of the specification. Drews, however, teaches a projection size that is functionally incapable of meeting any of the design objectives. Drews serves to reduce air resistance. That is the only stated objective of the Drews configuration and the projections disclosed by Drews would not be of a size to functionally meet the objectives of the invention. Drews, accordingly, is an insufficient reference to provide a basis for rejecting the claimed invention.

In the outstanding office action, the Examiner relies on flutes 9 in FIG. 4 as showing the undercut projections claimed. The Examiner overlooks limitations in the claims. Claims 1 and 16 recite the second side of each projection forming an undercut with the outer surface extending beneath the apex (P). The first and second sides of the projections as further claimed *originate* at surface (S1). Hence, the second claimed side forms from its place of origin (S1) to the apex (P) an undercut. Drews in FIG. 4 of the ‘302 reference as well as 4 of the ‘290 reference teaches a concave flute side in which at least a portion of the second side to its surface of origin does not form an undercut extending beneath the apex (P). Such portions of the Drew flutes extend beyond an apex formed between a longer and shorter flute side. Clearly second side portions in Drews extending beyond the apex of the flute to a surface of origin equivalent to surface S1 of the claimed invention do not form an undercut that lies beneath the apex as required in independent claims 1 and 16.

Additionally, the Examiner has not specified in the Dews references what is deemed to be the surface (S1 in the claims) from which the sides of the Dews flute originate. Reference is made in the following to FIG. 4 of Dews '302, the same flute configuration likewise shown in FIG. 4 of Dews '290. The Dews flutes are wave shaped with both a first side and a second side of each flute having a *concave configuration*. The first side (2) of each flute extends to an apex (A) and intersects a second side (4). The first side (2) of each Dews flute originates from the terminal end (P) along a concave radius with a terminal end of second side (4) of an adjacent flute. A plane T1 tangent at the terminal point (P) of a first side (2) will not cut a radially outer surface (S1) at an acute angle. Should the Examiner consider the series of points P as defining a surface, a position that is considered untenable by Applicants, tangent line T1 would be lie within that surface and not intersect it at an acute angle. Should the Examiner consider some other surface as equivalent to claimed surface S1, clearly flute surfaces 2, 4, of Dews would not intersect such a surface at all, much less at the claimed acute angle of claims 1, 16. Thus, Dews fails to meet the limitations of claims 1, 16 as to the formation of an undercut and fails to meet the limitations as to the intersection of a *any plane* (emphasis) tangent to the first side of a projection and a radially outer surface at an acute angle. The Examiner concedes that Dews 302 does not recite the height limitations in claims 1 and 16, representing yet another limitation of the claims not represented in the Dews art. For reasons above, Applicants have explained why the Examiner's proposed dimensional modifications of the Dews flutes go against the Dews teachings, purposes, and would not be obvious to one skilled in the art.

As to the rejected dependent claims 2, 4-9, 14-15, and 18, the Examiner's conclusions that the subject matter therein would be obvious by Dews 302/Fronek are uncorroborated, founded on an improper reading of Dews, and solely based on hindsight. The addition of Fronek to Dews does not overcome the deficiencies of the primary reference. Nor is there any teaching in either reference that would instruct one of skill in the art to make the selective combination of features that the Examiner is proposing to be obvious. Fronek lacks projections that meet the limitations of the claims as to being undercut and within a specific height range. Dews also fails to meet the limitations of the claims for the reasons discussed above. In addition, as the Examiner notes, Fronek is intended to be used for the sole objective of reducing drag in an article. The non-undercut Fronek projections would not effectively meet the objectives of the invention as to dirt and water repellence. The Examiner is incorrect in concluding that the present invention does not achieve unexpected results in

view of the applied art for neither reference individually or in combination can accomplish the stated objectives of the invention.

At to the dependent claims, the combination of Drews and Fronek is insufficient basis for rejection of the claims for at least the reasons set forth above. In claim 2, the acute angle formed by any plane tangent to the first side (2) and an outer surface S1 must be between 13 and 55 degrees. As shown in the attached reproduction from Drews '302, tangent line T1 does not intersect a surface within the range specified. Moreover, there is not instruction in Drews or Fronek for a plane cutting the radially outer surface at an angle tangent to the first side of the projection at a height not exceeding 75% (claim 4 depending from claims 3 and 1). Nor can Applicants agree that the limitations in claim 5 are met in FIG. 5 of Drews. Compare FIG. 5 of Drews with the claimed angle of the invention as shown in FIG. 7. Rows of neighboring projections in Drews' FIG. 5 are oriented such that their longitudinal axis are parallel, not at the claimed angle of claim 5.

Nor do the references teach projections having the structure of claim 1 wherein the projections are within a distance of 0 to 100 micrometers from each other (claim 6).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drews 302 in view of Fronek et al and optionally Drews 290 as applied above and further in view of Rethorst (US 3,523,661). This rejection is respectfully traversed for at least the reasons set forth above for the combination of Drews and Fronek and for the following additional reasons. There is no teaching in either Drews or Fronek for a rounding of an apex as set forth in the claims. Rethorst teaches an asymmetric diffuser for reducing drag in an aircraft wing. One of ordinary skill in the art would not be led toward the combination of disparate references that the Examiner is proposing to be obvious. No combination of the references would be possible save by the improper use of hindsight using the invention disclosure. The Examiner has pointed to no teaching in any of the references that would encourage one skilled in the art to look to projections applied to the problem of drag reduction for instruction in tire construction where dirt and water repellence, and visual distinction, are competing design objectives.

Claims 10-13, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drews 302 in view of Fronek et al and optionally Drews 290 as applied above and further in view of Heinen (GB 2,363,100 or US 6,415,835) or Ohsawa (US 2001/0032691). This rejection is respectfully traversed at least for the above reasons as to the combination of Drews, Fronek and for the following additional reasons.

The cited collective art simply fails to teach or suggest a projection falling within the parameters of the claimed invention. Ohsawa discloses an angle alpha between a long side A of a projection and a short side B that is substantially ninety degrees. The Examiner in a previous office action to the parent application has acknowledged that Ohsawa does not recite a projection falling within the parameters of the claimed invention. Applicants do not dispute that Ohsawa shows asymmetrical projections but, rather than rendering the invention obvious, the fact that the asymmetrical projections of Ohsawa lie outside the claimed parameters of the invention undercut channels is strong evidence of non-obviousness. The enhanced water and dispersement achieved by the present invention is not achieved by Ohsawa and there is no teaching or suggestion in the reference as to the modification proposed by the Examiner.

Likewise, Heinen teaches in FIG. 4 an asymmetrical projection but, like Ohsawa, the Heinen angle alpha between longer side A and shorter side B does not lie within the undercut claimed parameters. Heinen, in short, is cumulative to Ohsawa and both references, whether considered singularly, or in combination, fail to teach or suggest an undercut projection having an angle of inclination falling within the claimed invention specifications. The combination proposed in the rejection of claims 10-13 is therefore deficient in teaching the claimed invention given that the references each have structures inconsistent with the claimed invention. There is no instruction in Drews, Fronek, Heinen or Ohsawa that could possibly lead one skilled in the art to combine certain isolated features but not combine other features. That the references are intended for different applications and objectives (drag reduction versus dirt and water repellence) makes the Examiner's proposed combination even more improbable and remote.

As to claims 16 and 18, a mold for creating a tire having projections in which the angle between projection surfaces range from five to sixty degrees is not present in any teachings of Ohsawa. Severely sloping projections having a height that is within a 1 to 100 micrometer range is not taught by the reference. The conclusion that it would be obvious to modify the reference in order to achieve the invention is, accordingly, considered by Applicants to be pure hindsight and an improper basis for rejection of the pending claims.

Applicants reiterate that Ohsawa has a pitch less than two times the depth but does not have an undercut shorter second side in each projection such that the angle between the longer and shorter sides of each projection falls within the prescribed range.

Claims 15, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drews 302 in view of Fronek et al and optionally Drews 290 as applied above and further in

view of Kemp et al (US 6,253,815). This rejection is respectfully traversed for at least the reasons set forth above and for the following additional reasons. The Kemp reference, as the Examiner noted in a previous office action in the parent application, does not teach projections lying within the prescribed and claimed range of inclinations. Indeed, Kemp teaches, as the Examiner noted, a projection having substantially a ninety-degree angle between projection sides. Moreover, the Kemp projections have a height falling outside of the height of the projections claimed in the application. Given that Kemp directly teaches away from the claimed invention, it is incongruous to hold that a modification of Kemp toward the claimed invention would be obvious. Nothing in Kemp or Ohsawa provides instruction to their combination and modification. The invention teaches a low projection height (not found in Kemp) that gives a surface a fine texture while the projection of the invention is specifically recited to fall within a range of inclinations that will effectively eliminate fluid and dirt from the surface. Such a capability is not found in either Kemp or Ohsawa. For the aforesaid reasons, dependent claim 15 (from claim 1), independent claim 15, and dependent claim 18 are considered patentable over the cited art. Applicants claim in claim 1 and 16 and, by incorporation, their dependent claims, a specific projection structure and size. No cited art teaches such structure in a mold.

As to claim 15, no reference teaches lettering. The Examiner considers the Kemp reference to suggest lettering merely because Kemp suggests structure that visually differentiates a surface. Applicants note that it is the structure of claim 15 in combination with claim 1 that determines the patentability of claim 15. Kemp does not suggest lettering achieved by undercut projection structure set forth in claim 1. For this reason, claim 15 is considered patentably distinct as well.

Claim 17 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Drews 302 in view of Fronek et al and optionally Drews 290 as applied above and further in view of Japan 219 (JP 6-40219) or Baker (US 5,603,796). This rejection is respectfully traversed at least for the reasons set forth above and for the following additional reasons. No teaching in Japan 219 or Baker is directed at the use of tape in the steps of claim 17 in the process of making a tire having undercut projections configured as claimed. The Examiner has pointed to no teaching from Drews, Fronek, Japan 219, or Baker that remotely suggest utilizing tape having projections in the method claimed. Neither Japan 219 nor Baker relates to the use of tape in such a procedure. It is therefore an unsupported and improper conclusion that forms the basis for the rejection.

Tread

Claims 1-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa (US 2001/0032691) in view of at least one of Lobert et al (US 4,750,693), Drews 302 and Drews 290 and optionally in view of Japan '135 (JP 11-59135). This rejection is respectfully traversed for at least the reasons set forth above in regard to the Drews reference and for the following additional reasons. Drews 290 adds nothing to the Drews 302 reference and is, therefore, deficient for the reasons set forth previously in regard to Drews 302. Neither teaches a projection having the limitations in independent claims 1 and 16 and claims dependent therefrom. The Japan '135 and Lobert references do not teach projections that fall within the undercut construction and angle range of the claimed invention. Japan '135 projections have parallel sides. See FIG. protrusions 17. Lobert teaches a sawtooth configuration for drag reduction in airborne, waterborne and space vehicles. The projections of Lobert are for entirely different purposes and do not fall within the range of projection heights defined in the claims.

Ohsawa discloses an angle alpha between a long side A of a projection and a short side B that is substantially ninety degrees. The Examiner, in the First Office Action to parent application, 10/024,869, dated 11/19/2003, states on page 2 that: "Ohsawa does not specifically recite defining an angle alpha of 5-60 degrees". The specific teachings of Ohsawa are, therefore, deficient in meeting the claim limitations. Nor is there the suggestion that the Examiner is proposing as properly found in Ohsawa. Applicants do not dispute that Ohsawa shows asymmetrical projections but, rather than rendering the invention obvious, the fact that the asymmetrical projections of Ohsawa are not undercut and lie outside the claimed parameters of the invention is strong evidence of non-obviousness. Clearly, from Ohsawa, an asymmetrical cross section may have a non-undercut configuration and, therefore, an angle outside of the claimed range. The Examiner is using Ohsawa for a suggestion that the disclosure itself does not teach. The fact that the preferred embodiment of Ohsawa does not meet the claim limitations of the application suggests that the Examiner's interpretation of Ohsawa is not properly founded.

Moreover, as the Examiner notes, Ohsawa never teaches or suggests projections having undercuts. Therefore, logically, Ohsawa would not be instructive to one skilled in the art on the configuration of undercut projections for the multi-purposes of the invention and, in fact, teaches away from the invention. It is not clear how Ohsawa can instruct one in the art

to use its non-undercut projection configuration in applications for dirt and water repellence when the configuration and purpose of Ohsawa projections are decidedly different from the invention.

Drews does not, contrary to the Examiner's contention, teach use of projections within the range of apex heights specified. The Examiner is attempting to stretch the vague and ambiguous language of Drews far beyond its potential for instruction to one in the art. Combining Drews with Ohsawa is not contemplated by either reference.

As to claim 16, Ohsawa does not instruct as to the use of a mold to create the claimed projections. The "suggestion" perceived by the Examiner in the reference is sheer speculation and hindsight. The conclusions of obviousness as to claims 3 and 4 and the limitations therein is also considered by Applicants to be unsupported. As to claim 5, Ohsawa's Fig. 22 does not show neighboring undercut projections in which the neighboring projections are oriented laterally and define with each other an angle within the specified range. As to claim 6, Ohsawa does not teach undercut projections spaced as recited in claim 6. As to claim 7, there is no teaching in Ohsawa or suggestion as to configuring undercut grooves with curved sides as in claim 7. With regard to claim 8, there is no teaching in Ohsawa as to making an undercut projection angle vary within the specified range. As to claim 9, there is no teaching or suggestion in Ohsawa as to varying the height of an undercut projection within the same rubber component. With regard to claims 10-13, there is no teaching in Ohsawa as to configuring and placement of undercut projections as set forth. As to claim 14, the Ohsawa tire includes rubber sidewalls but there is no teaching on the placement of undercut projections therein as claimed. With regard to claim 15, the placement of the grooves in Ohsawa is in the tread for the purpose of water evacuation. Ohsawa cannot, therefore, be deemed instructive on sidewall lettering or sidewall surface differentiation for lettering purposes. As to claim 18, Ohsawa is deficient in teaching the vulcanization of a tire in a mold having projections that are incorporated into a tape pursuant to claim 16.

The Examiner's comments in regard to Applicant's previous arguments with respect to the pending claims are noted but are deemed unconvincing. It is well settled that for a combination of references to be obvious, there must be some teaching or suggestion in the references that would lead one skilled in the art to make the combination.

To establish *prima facie* obviousness, there 1) must be some suggestion or motivation in the art to modify or combine the references; 2) must be a reasonable expectation of success and 3) the combined references must teach or suggest all the claim limitations. *Bott v. Four*

Start Corp., 218 USPQ 358 (D.Ct, ED Mich 1983)(citing *Stevenson v. ITC*, 204 USPQ 276, 280 (CCPA 179)), “to be relevant, the area or art should be ‘where one of ordinary skill in the art would be aware that similar problems exist.’” Thus, to be relevant, the prior art must be in an area where one of ordinary skill in the art would be aware that similar problems exist. The problems that the invention solves are: dirt repellence and water repellence in combination with the capability for visible surface differentiation. The Examiner has pointed to no teaching that addresses these multiple and competing problems. Rather, the references are directed to a totally different set of problems, such as reduction of drag in a vehicle. The Examiner’s argument that no unexpected results are present invention is unsupported argument and conclusion. One skilled in the art would readily recognize the attainment by the claimed invention of the objectives found in the specification; objectives that cannot be achieved by any of the cited art singularly or in combination.

As to the differing objectives addressed by the cited art vis-a-vis the claimed invention, authority is well settled. Mere assertion by the Examiner that the references relate generally to a tire does not suffice in establishing a *prima facie* case of obviousness in their combination. In rejecting claims under 35 USC § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993)

The reason, suggestion or motivation to combine [references] may be found explicitly or implicitly: (1) in the prior art itself; (2) in the knowledge of those of ordinary skill in the art that certain references are of special interest or importance in the field; or (3) from the nature of the problem to be solved. Wesley Jessen Corp. v. Coopervision Inc., 63 USPQ2d 1897, 1901 (US Central Ca, 2002) (Ruiz v. A.B. Change Co., 234 F.2d 654, 665 (Fed. Cir. 2000)). In the case at hand, (1) none of the cited art itself refers to or would provide a motive to combine the references; (2) one of ordinary skill in the art would not look to design features meant to address an entirely different set of objectives for instruction in dirt and water repellence in combination with visual surface differentiation; and (4) the nature of the problem solved by the invention is different and unrelated to the problem of drag reduction addressed by the cited art.

One “cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” Ecolochem, Inc. v. Southern California Edison Co., 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000) (quoting In re Fine, 837 F.2d 1071, 1075 (Fed. Cir. 1988)). Such hindsight is precisely the sole basis and

means for the selective combination of Drews, Fronek, Rethorst, Heinen, Kemp, Japan 219, Baker, Lobert, Japan '135 or Ohsawa art in the manner presented by the Examiner.

The Examiner mis-characterizes the achievement of unexpected results of the invention as attorney argument. The Examiner has not shown how a result that includes simultaneous achievement of reduced hydroplaning, optical and color differentiation, and a reduced dirt in collection channels would not be unexpected when none of the cited art achieves such a result. None of the cited art solves the above set of problems and needs simultaneously in the manner set forth in the claims.

Applicants have pointed to specific claimed structure and how that structure contributes to solving the stated problems set forth in the specification. Applicants further have pointed to the deficiencies in the art toward addressing and solving the stated problems of the invention. The Examiner has denied the existence of unexpected results despite the success of the claimed invention in solving a set of problems unsolved by the prior art. One skilled in the art, upon consideration of the specification's specific stated objectives of the invention, would readily understand the success of the invention in meeting such objectives. In view of the above, reconsideration of the application and allowance of all pending claims is requested.

Sidewall/Claim 1

The Examiner's commentary regarding the teachings of Drews in regard to the sizing of its flutes is noted but is not deemed well supported by the reference. Indeed, as the Examiner has noted on Page 3, "Drews 302 does not specifically recite the projections as having a height of .2 to 100 micrometers". Applicants agree as to the deficiency in Drews and would further add that there is no teaching in Drew '302 whatsoever that would teach one skilled in the art to make a modification of the Drews flutes to fall within such range. In fact, the Drew reference as to the term "microscopic" without definition makes any reliance on the dimensional teachings of Drews speculation. Fronek teaches a projection of totally non-analogous construction for the sole purpose of reducing drag. No teaching is in Fronek that would direct one skilled in the art toward a combination with Drew '302.

The Examiner's reference to MPEP 2144 page 2100-140 Rev. 3 August 2005 is noted. However, the section does not state that a *combination and modification* of references that are directed to problems dissimilar to the invention problems, absent any instruction or suggestion from the references themselves, can properly be deemed to render the invention to

be obvious. The Examiner's position runs counter to well established authority that there must be a teaching in combined art to support a position that their combination would be obvious to one skilled in the art. Hindsight is not a substitute for the requirement that there be such a teaching.

As to the Examiner's comments regarding Applicant's purported failure to prove Fronek and Drew '302 non-enabling, no such requirement exists for patentability. Applicant's position is that neither the Fronek and Drews '302 teach the claimed invention for the reasons set forth above; and that there is no basis other than unsupported hindsight for the modification and combination proposed by the Examiner to be obvious to one skilled in the art. As to the terms "size" and "microscopic" the Examiner's position that such terms encompass any projection size is untenable. Applicants disagree that the use of the term "microscopic" in Drew '302 is sufficiently definite to instruct one of skill in the art to make a projection within the claimed range. See Applicant's comments above.

As to the Examiner's comments regarding stated objectives, there can be no dispute that Fronek and Drew '302 are both directed to the sole stated objective of drag reduction. "Microscopic" flutes are taught by Drew '302 to accomplish such an objective. Applicant's have presented projections that fall within a prescribed range not taught in Drew'302 for different objectives; namely enhanced self-cleaning; improved optical appearance; improved water repellence that reduces the risk of aquaplaning; and allow for color differentiation water channeling. The invention provides a range of projection heights to achieve these stated objectives. One of skill in the art would not know from Drew '302 depiction of its flutes as to how or why to make projections within the claimed range. No objective evidence is required to note the deficiencies of the cited art in teaching claimed limitations. Nor is there any basis for concluding modification to cited references necessary to meet claimed limitations must be presumed obvious to one skilled in the art absent objective evidence, especially when none of the cited art suggest such modification and combination.

Applicants dispute the Examiner's contention that evidence must be presented to note deficiencies in the prior art in meeting claimed limitations and why such limitations provide an advantage in meeting stated objectives of the invention. The Examiner bears the burden of showing a combination of references directed to different purposes and objectives would be obvious to one skilled in the art. That burden has not been met. The Examiner has acknowledged that Drew '302 does not teach the claimed range of heights for the Applicant's projections and has not identified any teaching or suggestion in the reference that would lead

one skilled in the art toward the claimed structure.

Remaining Claims

The Examiner's remarks are noted but are unconvincing. The Examiner's position is essentially: one skilled in the art would look to art relating to drag reduction for instruction on solving competing needs for a tire exhibiting improved self-cleaning; improved optical appearance; improved water repellence that reduces the risk of aquaplaning. Furthermore, one skilled in the art upon looking to art relating to drag reduction would identify in the cited certain structural elements, to the exclusion of other structural elements, that could be selectively sized, modified in configuration, and combined in order to achieve the stated objectives. Applicants find the proposition untenable and only possible through hindsight using the instant disclosure. The Examiner has pointed to no teaching or suggestion in the references themselves to support the modification and combination proposed.

The Examiner has requested authority for Applicant's position. In rejecting claims under 35 USC § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). The reason, suggestion or motivation to combine [references] may be found explicitly or implicitly: (1) in the prior art itself; (2) in the knowledge of those of ordinary skill in the art that certain references are of special interest or importance in the field; or (3) from the nature of the problem to be solved. Wesley Jessen Corp. v. Coopervision Inc., 63 USPQ2d 1897, 1901 (US Central Ca, 2002) (Ruiz v. A.B. Change Co., 234 F.2d 654, 665 (Fed. Cir. 2000)). In the case at hand, (1) none of the cited art itself refers to or would provide a motive to combine the references; (2) one of ordinary skill in the art would not look to design features meant to address an entirely different set of objectives for instruction in dirt and water repellence in combination with visual surface differentiation; and (4) the nature of the problem solved by the invention is different and unrelated to the problem of drag reduction addressed by the cited art. One "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." Ecolochem, Inc. v. Southern California Edison Co., 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000) (quoting In re Fine, 837 F.2d 1071, 1075 (Fed. Cir. 1988)). Such hindsight is precisely the sole basis and means for the selective combination of Drews, Fronek, Rethorst, Heinen, Kemp, Japan 219, Baker, Lobert, Japan '135 or Ohsawa art in the manner presented by the Examiner.

As to claim 4, see the remarks above and attached reproduction Drew reference drawings discussed herein. As to claim 5, Applicant is arguing that the Drew '302 projections are aligned so as not to define neighboring projections oriented laterally such that their longitudinal axes are angularly divergent as set forth in claim 5. As to claim 6, Drew flutes are contiguous, i.e. one flute end merging into another flute as to FIG. 4 of Drew '302 and are not oriented as to intersect a surface S1 at originating ends of flute sides. As to claim claims 10-13, Applicant's previous comments are incorporated herein by reference. The differences noted by Applicant's attorney are not "argument" but factual evidence in the cited reference documents. As to claims 10-13, 16 and 18, Applicant's have previously discussed during prosecution how the cited art differs and the total lack of teaching or instruction from the references themselves to support the Examiner's selective combination and reconstruction of such references.

With respect to claims 16 and 18, the differences between respective molds used to form the cited reference structure and the mold incorporating all of the limitations of claims 16 and 18 have been previously discussed.

In general, the Examiner's characterization of Applicant's position as attacking references individually is a mischaracterization. Applicant's position is that each of the cited art teaches away from the claimed invention in their respective structural differences; the prior art is directed to applications distinctive from the stated objectives of the present invention and that, accordingly, the selective modification and combination of structural elements to the exclusion of other elements proposed by the Examiner would not be obvious to one of skill in the art absent improper use of the subject disclosure as a blueprint.

Tread

The Examiner's remarks are noted. Applicant's position that the cited art is directed to problems and objectives different from the claimed invention requires no evidence or objective testing. The documents speak for themselves. Drag reduction is not the same as dirt and water repellence in combination with visual surface differentiation. Applicant's position that the cited art individually and in their combination fails to teach or suggest the claimed invention is further not a matter requiring evidence beyond the documents themselves. The differences are as discussed herein and in prior responses. That the cited art is devoid of any teaching or suggestion to support the selective combination and modifications required to achieve the claimed invention is also evident from the documents themselves. The Examiner has presented no plausible teaching from the references that

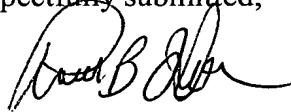
would support the combination and modifications now proposed as obvious. The deficiencies in the cited art in teaching claimed projections having sizing; configuration; and orientation as claimed has been itemized above.

References of Interest

The Examiner's notation of various references use and definition of "microscopic" is strong evidence that the term may mean different things to different parties. Hence, the instructive value of such a term to one skilled in the art in constructing projections that fall within the prescribed ranges of the claimed invention is speculative and ambiguous at best.

For the reasons set forth above and previously, Applicants contend that the cited art individually and collectively fail to teach or suggest the claimed invention and that the modifications to the prior art necessary to achieve the claimed invention could only be achieved through the use of the instant disclosure as blueprint. Accordingly, reconsideration and allowance of the pending claims is requested.

Respectfully submitted,



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